

### **Amendments of the Claims:**

A detailed listing of all claims in the application is presented below. This listing of claims will replace all prior versions, and listings, of claims in the application. All claims being currently amended are submitted with markings to indicate the changes that have been made relative to immediate prior version of the claims. The changes in any amended claim are being shown by strikethrough (for deleted matter) or underlined (for added matter).

1. (Currently Amended) ~~An encoded~~ A computer-readable ~~data~~ data medium comprising a repository of material property data, said data comprising a plurality of materials property datasets each dataset being associated with a sample of a material and a test on the sample of the material, each dataset comprising:
  - a) a metadata database in the form of instances with associated metadata giving information about the instances, the metadata comprising at least one data element selected from a list comprising name, description, and identifying information, ~~data type, units, acceptable values or ranges, and default value~~, the metadata database comprising:
    - i) metadata on the material;
    - ii) metadata on the sample;
    - iii) metadata on the test; and
    - iv) metadata on data value elements in a test result database further comprising at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value; and
    - v) metadata on the metadata, comprising at least one data element describing the metadata on the material, sample, test and data value elements in the metadata database;
  - b) the test result database comprising a plurality of instances having associated metadata in the metadata database giving information about the instance, the

instances comprising information about at least one result derived from the test on the sample of the material, each instance comprising:

i) at least one data element identifying representing information about at least one of the material, the sample or the test; and

ii) at least one data value element representing a test result, selected from a list comprising a single data point, an equation, a graph, a data array, and a picture;

wherein such that the metadata in the metadata database define the instances in the metadata database and the instances of test result information in the test result database, and

wherein an instance from the test result database, combined with its associated metadata from the metadata database describes the test result derived from the test on the sample of the material.

2. (Currently Amended) The repository of claim 1, in which the data element metadata on metadata of claim 4(a)(ii) 1(a)(v) on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier, and material composition for composite materials.

3. (Currently Amended) The repository of claim 1, in which the data element metadata on metadata of claim 4(a)(ii) 1(a)(v) on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type.

4. (Currently Amended) The repository of claim 1, in which the data element metadata on metadata of claim 4(a)(iii) 1(a)(v) on the test comprises at least one data element selected from a list comprising a description of test method, test parameters, and test source information.

5. - 11. (canceled)

12. (Previously Presented) The repository of claim 1, in which results that share common defining parameters are grouped to display the effect of the defining parameters on the result.

13. (Previously Presented) The repository of claim 1, further comprising a customer database, comprising information about users of the repository.

14. (Previously Presented) The repository of claim 13, in which the users about whom information is stored in the customer database comprise owners, users and providers of material property datasets in the repository.

15. (Currently Amended) A method of managing material property data comprising the steps of:

- a) storing material property data in a repository stored in a computer memory comprising a plurality of materials property datasets, each dataset:
  - i) being created by a data provider;
  - ii) having at least one owner;
  - iii) being associated with a sample of a material and a test on the sample of the material; and
  - iv) comprising:
    - a) a metadata database in the form of instances with associated metadata giving information about the instances, the metadata comprising at least one data element selected from a list comprising name, description, and identifying information, ~~data-type, units, acceptable values or ranges, and default value~~, the metadata database comprising:
      - 1) metadata on the material;
      - 2) metadata on the sample;
      - 3) metadata on the test; and

4) metadata on data value elements in a test result database  
further comprising at least one data element selected from a list comprising data type, units, acceptable values or ranges, and default value; and

5) metadata on the metadata, comprising at least one data element describing the metadata on the material, sample, test and data value elements in the metadata database;

b) the test result database comprising a plurality of instances having associated metadata in the metadata database giving information about the instance, the instances comprising information about at least one result derived from the test on the sample of the material, each instance comprising:

1) at least one data element identifying representing information about at least one of the material, the sample or the test; and

2) at least one data value element representing a test result, selected from a list comprising a single data point, an equation, a graph, a data array, and a picture; and

c) a customer database, comprising information about users of the repository, the users about whom information is stored in the customer database comprise owners, users and providers of information in the repository

wherein such that the metadata in the metadata database define the instances in the metadata database and the instances of test result information in the test result database, and

wherein an instance from the test result database, combined with its associated metadata from the metadata database describes the test result derived from the test on the sample of the material;

- b) providing at least one data owner with access to at least one dataset in the repository;
- c) providing at least one data user with access to at least one dataset in the repository; and
- d) displaying information from at least one dataset stored in step (a) and accessed by the user in step (c) on a display.

16. (Previously Presented) The method of claim 15, in which the materials property datasets are created by the data provider by the steps of:

- specifying generic information about the material including at least one of a class, subclass, terms that are commonly associated with the material, notes about the material, generic physical attributes, component materials of the material and their relationship within the material;
- performing preliminary validation checks as to whether the information for the material already exists;
- perform preliminary validation checks regarding structure of the data;
- when the dataset passes the checks, entering the dataset into the repository.

17. (Previously Presented) The method of claim 16, in which the data provider specifies the dataset by submitting datasets, each of which represent the results of measurements.

18. (Previously Presented) The method of claim 17, in which the datasets are submitted interactively using a form over a computer network.

19. (Previously Presented) The method of claim 17, in which the datasets are submitted from a computer program.

20. (Previously Presented) The method of claim 19, in which the datasets are submitted by the computer program using SOAP protocol.

21. (Original) The method of claim 15, in which the information on the material in at least one dataset further comprises a nomenclature of the material, and the dataset further comprises an identification of a material vendor, the method further comprising the step of providing the material vendor with access to the dataset for maintenance of the nomenclature.
22. (Original) The method of claim 21, in which the nomenclature is selected from a list comprising class, sub-class and general physical attributes.
23. (Previously Presented) The method of claim 15, in which the step of providing the data owner with access to at least one dataset in the repository comprises the steps of:  
presenting the data owners with a list summarizing the data that they own, each item in the list possessing sufficient information for the owner to identify the property, the information being at least one of the name of the material, the name of the property, a date of measurement, identification of a specimen sample as obtained from the data provider and an identification of the test as obtained from the data provider; and  
presenting the owner with a hyperlink which would lead to the display of an overview and details of all results of the test.
24. (Previously Presented) The method of claim 23, further comprising the step of allowing the owner to narrow down the list to data which represent a same test or property data for a same sample.
25. (Previously Presented) The method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:  
allowing the user to indicate any requirements on class, subclasses or suppliers of material;  
allowing the user to indicate properties sought;  
presenting a set of materials with their properties;

allowing the user to select at least one material and property from the set; and

displaying a summary and details of a set of datasets for the specified material and property.

26. (Original) The method of claim 15, in which at least some of the datasets in the repository further comprise data representing permitted user access privileges, and the step of providing a user with access to the repository comprises the step of comparing the user's access privileges to the data representing permitted user access privileges, and denying access to a dataset if the user's access privileges are not sufficient to access the dataset.

27. (Original) The method of claim 26, further comprising the steps, after the step of denying access, of:

presenting the user with a form to request access to the dataset;

accepting the form from the user;

notifying the data owner of the request for access, along with basic identification and contact information about the requesting user;

allowing the data owner to accept or reject the request;

if the data owner accepts the request, updating the data access privileges in the dataset to permit access by the user.

28. (Previously Presented) The method of claim 15, in which the step of providing the data user with access to at least one dataset in the repository comprises the steps of:

allowing the user to indicate any requirements on class, subclasses or suppliers of material;

allowing the user to indicate restrictions on values of results;

presenting a set of materials with their properties which conform to the restrictions;

allowing the user to select at least one material and property from the set; and

displaying a summary and details of a set of datasets for the specified material and property.

29. (Original) The method of claim 15, in which the step of providing the data user with access comprises the step of providing data in a format which is understandable by a selected computer program or application.
30. (Original) The method of claim 29, in which the repository further stores information describing the format which is understandable by a selected computer program or application.
31. (Original) The method of claim 15, in which there are a plurality of data users and a plurality of domains, and at least one domain administrator associated with at least one domain, and the method further comprises the steps of:
  - the domain administrator assigning at least some of the plurality of users to at least one domain,
  - the domain administrator setting policies for access of at least one dataset by the users assigned to the domain.
32. (Original) The method of claim 31, in which the domains are a company or a division of the company.
33. (Original) The method of claim 31, further comprising the step of permitting the domain administrator to assign at least one domain to at least one other domain.
34. (Currently Amended) The method of claim 15, in which the data element metadata on metadata of claim 15(a)(iv)(a)(1) 15(a)(iv)(a)(5) on the material comprises at least one data element selected from a list comprising material name, material class, one or more material subclasses, material supplier, and material composition for composite materials.
35. (Original) The method of claim 15, in which a data life cycle of at least one dataset is controlled by the step of permitting at least one user to activate, deactivate, deprecate and discard the dataset.

36. (Original) The method of claim 35, further comprising the step of providing any user with a review of any active dataset upon request.

37. (Currently Amended) The method of claim 15, in which the the data element metadata on metadata of claim 15(a)(iv)(a)(2) 15(a)(iv)(a)(5) on the sample comprises at least one data element selected from a list comprising a sample identification, a sample description, a sample size, a sample source and a sample type.

38. (Currently Amended) The method of claim 15, in which the the data element metadata on metadata of claim 15(a)(iv)(a)(3) 15(a)(iv)(a)(5) on the test comprises at least one data element selected from a list comprising a description of test method, a standards body specifying the test, test parameters, and test source information.

39.-46. (canceled)

47. (Original) The method of claim 15, further comprising the step of providing at least one data owner with means to monitor usage of at least one dataset.